

SEQUENCE LISTING

<170> PatentIn Ver. 2.0

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<211> 1019

<212> DNA

<213> Homo sapiens

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<223> Description of Sequence: Recombinant
Polynucleotide

<220>

<221> CDS

<222> (16)..(1008)

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Phe Gly Gly Glu Pro Leu Ser Tyr Thr Arg Phe Ser Leu Ala Arg Gln

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gta gat ggc gat aac agt cat gtg gag atg aaa ctt gct gta gat gaa
147
Val Asp Gly Asp Asn Ser His Val Glu Met Lys Leu Ala Val Asp Glu

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gaa gaa aat gct gac aat aac aca aag gcc aat gtc aca aaa cca aaa
195
Glu Glu Asn Ala Asp Asn Asn Thr Lys Ala Asn Val Thr Lys Pro Lys

agg tgt agt gga agt atc tgc tat ggg act att gct gtg atc gtc ttt
243
Arg Cys Ser Gly Ser Ile Cys Tyr Gly Thr Ile Ala Val Ile Val Phe

ttc ttg att gga ttt atg att ggc tac ttg ggc tat tgt aaa ggg gta
291
Phe Leu Ile Gly Phe Met Ile Gly Tyr Leu Gly Tyr Cys Lys Gly Val

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gaa cca aaa act gag gga tcc gag ccc aaa tct tgt gac aaa act cac
339
Glu Pro Lys Thr Glu Gly Ser Glu Pro Lys Ser Cys Asp Lys Thr His

95 100 105

aca tgc cca ccc tgc cca gca cct gaa ctc ctg ggg gga ccg tca gtc
387
Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val

ttc ctc ttc ccc cca aaa ccc aag gac acc ctc atg atc tcc cgg acc
435

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr

cct gag gtc aca tgc gtg gtg gac gtg agc cac gaa gac cct gag
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Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu

145 150 155

gtc aag ttc aac tgg tac gtg gac ggc gtg gag gtg cat aat gcc aag
531

Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys

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aca aag ccg cgg gag gag cag tac aac aac acg tac cgt gtg gtc agc
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Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser

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gtc ctc acc gtc ctg cac cag gac tgg ctg aat ggc aag gag tac aag
627
Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys

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tgc aag gtc tcc aac aaa gcc ctc cca gcc ccc atc gag aaa acc atc
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Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile

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tcc aaa gcc aaa ggg cag ccc cga gaa cca cag gtg tac acc ctg ccc
723
Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro

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230

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771
Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu

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TOP SECRET - 44604

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300

tgg cag cag ggg aac gtc ttc tca tgc tcc gtg atg cat gag gct ctg
963
Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu

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cac aac cac tac acg cag aag agc ctc tcc ctg tct ccg ggt aaa
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<210> 2

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<212> PRT

<213> Homo sapiens

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Asn Ser His Val Glu Met Lys Leu Ala Val Asp Glu Glu Glu Asn Ala

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Asp Asn Asn Thr Lys Ala Asn Val Thr Lys Pro Lys Arg Cys Ser Gly

Ser Ile Cys Tyr Gly Thr Ile Ala Val Ile Val Phe Phe Leu Ile Gly

Phe Met Ile Gly Tyr Leu Gly Tyr Cys Lys Gly Val Glu Pro Lys Thr

Glu Gly Ser Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro

100 105 110

Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro

115 120 125

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr

Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn

145 **150** **155** **160**

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Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val

180 185 190

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser

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205

Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys

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215

220

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp

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240

Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe

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Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu

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270

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe

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Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly

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<212> DNA

<213> Homo sapiens

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<223> Description of Sequence: Recombinant

Polynucleotide

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<221> CDS

<222> (16)..(963)

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ttt ggt gga gaa cca ttg tca tat acc cgg ttc agc ctg gct cgg caa 99

Phe Gly Gly Glu Pro Leu Ser Tyr Thr Arg Phe Ser Leu Ala Arg Gln

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25

gta gat ggc gat aac agt cat gtg gag atg aaa ctt gct gta gat gaa
147

Val Asp Gly Asp Asn Ser His Val Glu Met Lys Leu Ala Val Asp Glu

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40

gaa gaa aat gct gac aat aac aca aag gcc aat gtc aca aaa cca aaa
195

Glu Glu Asn Ala Asp Asn Asn Thr Lys Ala Asn Val Thr Lys Pro Lys

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243
Arg Cys Ser Gly Ser Ile Cys Tyr Gly Thr Ile Ala Val Ile Val Phe

65 70 75

ttc ttg att gga ttt atg att ggc tac ttg ggc tat tgt aaa ggg gta
291
Phe Leu Ile Gly Phe Met Ile Gly Tyr Leu Gly Tyr Cys Lys Gly Val

80 85 90

gaa cca aaa act gag gga tcc gca cct gaa ctc ctg ggg gga ccg tca
339
Glu Pro Lys Thr Glu Gly Ser Ala Pro Glu Leu Leu Gly Gly Pro Ser

95 100 105

gtc ttc ctc ttc ccc cca aaa ccc aag gac acc ctc atg atc tcc cgg
387
Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg

110 115 120

acc cct gag gtc aca tgc gtg gtg gac gtg agc cac gaa gac cct
435
Thr Pro Glu Val Thr Cys Val Val Asp Val Ser His Glu Asp Pro

125 130 135 140

gag gtc aag ttc aac tgg tac gtg gac ggc gtg gag gtg cat aat gcc
483
Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala

145 150 155

aag aca aag ccg cgg gag gag cag tac aac agc acg tac cgt gtg gtc
531
Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val

160 165 170

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agc gtc ctc acc gtc ctg cac cag gac tgg ctg aat ggc aag gag tac
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Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr

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aag tgc aag gtc tcc aac aaa gcc ctc cca gcc ccc atc gag aaa acc
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Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr

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Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu

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ccc cca tcc cgg gat gag ctg acc aag aac cag gtc agc ctg acc tgc
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Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys

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235

ctg gtc aaa ggc ttc tat ccc agc gac atc gcc gtg gag tgg gag agc
771
Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser

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aat ggg cag ccg gag aac aac tac aag acc acc cct ccc gtg ctg gac
819
Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp

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tcc gac ggc tcc ttc ttc ctc tac agc aag ctc acc gtg gac aag agc
867
Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser

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agg tgg cag cag ggg aac gtc ttc tca tgc tcc gtg atg cat gag gct
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Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala

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ctg cac aac cac tac acg cag aag agc ctc tcc ctg tct ccg ggt aaa

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Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys

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<212> PRT

<213> Homo sapiens

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Asn Ser His Val Glu Met Lys Leu Ala Val Asp Glu Glu Glu Asn Ala

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Asp Asn Asn Thr Lys Ala Asn Val Thr Lys Pro Lys Arg Cys Ser Gly

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Ser Ile Cys Tyr Gly Thr Ile Ala Val Ile Val Phe Phe Leu Ile Gly

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Phe Met Ile Gly Tyr Leu Gly Tyr Cys Lys Gly Val Glu Pro Lys Thr

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Glu Gly Ser Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe

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Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val

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Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe

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Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr

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Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val

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Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala

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Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg

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215

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Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly

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Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro

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Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser

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Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln

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Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His

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Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys

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<210> 5

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<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Primer

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<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

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<211> 32

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<213> Artificial Sequence

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<223> Description of Artificial Sequence: Primer

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<211> 31

<212> DNA

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<210> 9

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